forming an image signal from the electrical signal, and a color space converting part for storing an attribute information of said image pickup apparatus and a plurality of predetermined, diverse color spaces selectable therein for converting a color space of the image signal; and

a display control part for controlling said image pickup apparatus and said display device,

wherein said control part controls said color space converting part to convert a color space of said image signal after receiving said attribute information through an interface means. —.

REMARKS

This Amendment and the accompanying Request for Continued Examination ("RCE") are being filed in response to the final Office Action mailed May 17, 2001. A Request For Extension of Time for extending the due date for responding to the Office Action by three months and the RCE are being filed together with this Amendment. A credit card form authorizing payment for the extension of time and the filing fee for filing the RCE is included with this Amendment. If necessary, please charge any other fees for entry of this Amendment and RCE to our Deposit Account No. 18-1644.

Claims 1, 10, 20, 24 and 28 have been amended. Attached to this Amendment is a marked-up version of the changes made to the claims. The marked-up version is entitled "Version With Markings To Show Changes Made."

The Examiner has rejected applicants' claim 28 under 35 USC § 112, second paragraph, as failing to particularly point out and distinctly claim applicants' invention. In particular, the Examiner

states that in claim 28 the recitation of "said interface means" lacks antecedent basis for the limitation in the claim. With respect to claim 28, the recitation of "said interface means" has been changed to –an interface means–, thereby obviating this rejection. It is submitted that applicants' claim 28, as amended, now particularly points out and distinctly claims applicants' invention, and thus satisfies the requirements of 35 USC § 112, second paragraph.

The Examiner has rejected applicants' claims 1, 10, 12, 20-22, and 24-28 under 35 USC § 103(a) as unpatentable over Takizawa et al. in view of Lightbody et al. The Examiner has additionally rejected applicants' claims 2-9, 11, 13-19 and 23 under 35 USC § 103(a) based on the latter two patents and further in view of Sakoda et al. With respect to applicants' claims, as amended, these rejections are respectfully traversed.

Applicants' independent claims 1, 10, 20, 24 and 28 have been amended. These claims each recite an image pickup device comprising a color space converting part for storing attribute information of the image pickup device and a plurality of predetermined, diverse color spaces selectable therein for converting a color space of the image signal. Claims 1, 10, 20 and 24 further recite that the color space converting part is controlled to reduce an amount of image signals transferred through an interface part. In accordance with the invention as claimed in the amended independent claims, the color space converting part is arranged to convert information of a plurality of kinds corresponding to picture elements, thereby permitting efficient transfer of a large amount of diverse color space data. (Application page 6, lines 16-21; page 11, lines 25-27; page 20, lines 11-27). Such arrangement thus achieves the objective of the present invention, namely, to improve the transmission speed of the image pickup apparatus. (Application page 21, lines 2-5; page 23, lines 19-21; page 26, lines 10-17).

Such a construction is not taught or suggested by the cited art of record. As the examiner states, the cited Takizawa et al. patent does not teach or suggest an image pickup device having a color space converting part. The Lightbody et al. patent does show a PC having a color space converter, but neither discloses nor suggests efficient transfer of a large amount of diverse color space data. In fact, color space converter and subsampler 80 of the Lightbody et al. reference are constrained to operate at the rate of the video system. (Column 5, lines 43-45). The Lightbody et al. reference thus does not teach or suggest an image pickup apparatus having a color space converter that improves the transmission speed of the image pickup apparatus. Even if the cited Takizawa et al. and Lightbody et al. references were combined, as suggested by the Examiner, the resulting device would not have the features of the present invention, namely, an image pickup device having a color space converting part capable of converting diverse color space data and permitting high speed transmission of such data.

In view of the above, it is submitted that applicants' independent claims, as amended, patentably distinguish over the combination of the Takizawa et al. and Lightbody et al. patents. Additionally, the other cited patent, i.e., Sakoda et al., fails to add anything to the Takizawa et al. and Lightbody et al. patents to change this conclusion.

Reliance is placed on In re Fine, 5 U.S.P.Q. 2d 1596, 1600 (Fed. Cir. 1988) and Ex parte Kochan, 131 U.S.P.Q. 204 (Bd. App. 1960) for allowance of the dependent claims, since they differ in scope from the parent independent claims which are submitted as patentable. Accordingly, reconsideration of the claims is respectfully requested.

If the Examiner believes that an interview would expedite consideration of this Amendment or of the application, a request is made that the Examiner telephone applicant's

counsel at (212) 682-9640.

Dated: November 19, 2001

Respectfully submitted,

John J. Torrente

ROBIN, BLECKER & DALEY
330 Madison Avenue
New York, New York 10017
(212) 682-9640

John J. Torrente
Reg. No. 26,359
An Attorney of Record

B208-837

Version With Markings To Show Changes Made

IN THE CLAIMS

Amend claims 1, 10, 20, 24 and 28 as follows:

-- 1. (Five Times Amended) An image pickup system comprising:

an image pickup apparatus including an image sensor for photo-electrically converting a picked-up object image into an electrical signal, an image signal generating part for forming an image signal from the electrical signal, a color space converting part [having memory means] for storing an attribute information of said image pickup apparatus and a plurality of predetermined, diverse color spaces selectable therein for converting a color space of the image signal, and an interface part for externally transferring the image signal and said attribute information to an external signal processing apparatus; and

an external signal processing apparatus connected to said interface [means] part having a signal processing [means] circuit for processing said image signal transferred through said interface part and having a control part for controlling said image pickup apparatus through said interface part,

wherein said control part receives said attribute information controls said color space converting part to reduce [bit numbers] an amount of image signals transferred through said interface part [correspondingly with a color space characteristic of said external processing apparatus]. --.

-- 10. (Five Times Amended) An image pickup apparatus comprising:

an image sensor for photo-electrically converting a picked-up object image into an

electrical signal;

an image signal generating part for forming an image signal from the electrical signal;

a color space converting part [having memory means] for storing an attribute information of said image pickup apparatus and a plurality of predetermined, diverse color spaces selectable therein for converting a color space of the image signal; and

an interface part for externally transferring the image signal and said attribute information to an external signal processing apparatus,

wherein said color space converting part is controlled by an external signal processing apparatus connected to said interface part to reduce [bit numbers] an amount of image signals transferred through said interface part [correspondingly with a color space characteristic of said external signal processing apparatus] after transferring said attribute information through said interface [means] part. --.

-- 20. (Five Times Amended) An image pickup unit comprising:

image pickup [means] part for picking up an optical image to form a picked-up image signal;

interface [means] part for performing communication with an external signal processing apparatus [memory means] for storing an attribute information of said image pickup unit; and

color space compression control [means] part having a plurality of predetermined, diverse [bit reduction] color space compression data for controlling and reducing [bit numbers] an amount of picked-up signals transferred to said external signal processing apparatus according to a

control signal supplied from said external signal processing apparatus through said interface [means] part after transferring said attribute information through said interface [means and wherein said control signal corresponds to a color space characteristic of said external signal processing apparatus] part. --.

-- 24. (Five Times Amended) A picked-up image signal processing apparatus comprising:

interface [means] part for performing communication with an image pickup unit including image pickup [means] unit for picking up an optical image to form a picked-up image signal, an attribute information of said image pickup unit and a plurality of predetermined, diverse color space conversion data therein; and

transmission control [means] part for transmitting to said image pickup unit through said interface [means] part a control signal for controlling and reducing [bit number] an amount of each color signal picked-up image signals transferred through said interface [means] part after receiving said attribute information through said interface [means, said control signal corresponds to a color space characteristic of said picked-up signal processing apparatus] part. --.

-- 28. (Three Times Amended) An image pickup system adapted for use with any one of plural, diverse type image display devices, comprising:

an image pickup apparatus including an image sensor for photo-electrically converting a picked-up object image into an electrical signal, an image signal generating part for forming an image signal from the electrical signal, and a color space converting part [having memory means] for storing an attribute information of said image pickup apparatus and a plurality of predetermined, diverse color spaces selectable therein for converting a color space of the image signal; and

a display control part for controlling said image pickup apparatus and said display device,

wherein said control part controls said color space converting part to convert a color space of said image signal [by using said predetermined, diverse color spaces individually correspondingly with a color space characteristic of display device used with said image pickup system] after receiving said attribute information through [said] an interface means. —.